

REMARKS

Claim 1 was rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,369,555 to Rincon-Mora. Claim 2 was rejected under 35 U.S.C. 103(a) as being unpatentable over Rincon-Mora in view of US Patent No. 6,226,045 to Vidovich. Claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Rincon-Mora in view of US Patent Application Publication No. 2001/0036227 to Matsuo et al. Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Rincon-Mora in view of US Patent Application Publication No. 2004/0151198 to Brown et al.

The control circuit of the present invention includes a voltage divider, a high speed voltage comparator, and a positive feedback network. When an IEEE1394b PHY is sending a tone, the PHY transmitter (TPB+/-) outputs a 50 MHz signal that is 667 μ sec wide with a typical common mode voltage ramping from 0V to 1.5V. This common mode voltage signal is fed into the negative input of the comparator and is compared with a reference voltage of about 50% of the PHY output common mode voltage generated by the voltage divider at the positive input of the comparator. When the voltage at the positive input is greater than the voltage at the negative input a logic high may be output, otherwise a logic low is output. When a tone is present the TPB's common mode voltage signal will ramp up from 0V and cross over the reference level then finally settle at 1.5V during the 667 μ sec tone period. When the voltage signal crosses the reference level, the comparator's output instantly transitions to the logic low from the logic high. During the quiet period between two consecutive tones, the common mode voltage remains at a 0V level. The output of the comparator may be connected to the TxEn_Bar input of the optical transceiver so as to disable the transmitter when the comparator output it is at the logic high and enable the transmitter when it is at the logic low. In this manner, when a tone is present the optical transmitter is enabled and during the quiet period between two consecutive tones the optical transmitter is disabled. A positive feedback

network provides for improvement in the comparator's transient response to avoid possible interferences to the establishment of the toning process between the peer 1394b PHYs when a pair of optical transceivers are connected in between. These interferences are due to the sensitivity of the TxEn_Bar input of the optical transceiver to the electronic circuit's inherent noise.

Applicants respectfully submit that none of the references cited by the Examiner show or suggest the invention as now claimed in claims 1-4, which have been amended to more clearly define the scope of the invention.

35 U.S.C. Section 102(b) Rejections

Claim 1 was rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,369,555 to Rincon-Mora. Rincon-Mora discloses a hysteretic dc-dc converter circuit comprising a buck converter circuit having an output which forms an output of the converter circuit and a hysteretic comparator circuit having an output coupled to an input of the buck converter circuit. Applicants respectfully submit that, as amended, claim 1 is not anticipated by Rincon-Mora. More specifically, Rincon-Mora does not disclose an on-off control circuit between an IEEE 1394a and IEEE 1394b compliant physical layer output driver circuitry and an optical transceiver, including; (1) a comparator having a first input for receiving an input signal from the output driver circuitry and an output for providing an output signal to the optical transceiver; (2) a reference voltage source coupled to a comparator second input; and (3) a feedback network coupled to the second input for providing a hysteresis window, wherein the optical transceiver is enabled during a period in which the output driver circuitry is sending a tone, and disabled during an interval between tones. Withdrawal of this rejection is respectfully requested.

35 U.S.C. Section 103(a) Rejections

Claim 2 was rejected under 35 U.S.C. 103(a) as being unpatentable over Rincon-Mora in view of US Patent No. 6,226,045 to Vidovich. Vidovich discloses an apparatus for detecting the phase difference between the red, green and blue signal transitions and the dot clock signal that has been regenerated from the Horizontal sync signal. Vidovich discloses a high speed voltage comparator in the circuit for eliminating amplitude variations. Applicants respectfully submit that claim 2, which depends directly from amended claim 1 and includes all of the limitations thereof, is patentable over the cited references. Neither Rincon-Mora nor Vidovich show or suggest the claimed on-off control circuit. Withdrawal of this rejection is respectfully requested.

Claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over Rincon-Mora in view of US Patent Application Publication No. 2001/0036227 to Matsuo et al. Matsuo et al. disclose a communication control circuit including a physical layer driver circuit in compliance with IEEE 1394. Applicants respectfully submit that claim 3, which depends directly from amended claim 1 and includes all of the limitations thereof, is patentable over the cited references. Neither Rincon-Mora nor Matsuo et al. show or suggest the claimed on-off control circuit. Withdrawal of this rejection is respectfully requested.

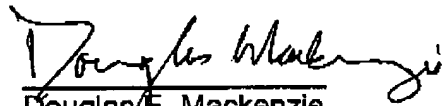
Claim 4 was rejected under 35 U.S.C. 103(a) as being unpatentable over Rincon-Mora in view of US Patent Application Publication No. 2004/0151198 to Brown et al. Brown et al. disclose a method and architecture for accepting any arbitrary data stream and transmitting it to a 1000BASE-T physical layer for transmission as a 1000BASE-T stream. Applicants respectfully submit that claim 4, which depends directly from amended claim 1 and includes all of the limitations thereof, is patentable over the cited references. Neither Rincon-Mora

nor Brown et al. show or suggest the claimed on-off control circuit. Withdrawal of this rejection is respectfully requested.

CONCLUSION


Applicants respectfully request entry of the above amendment. Should the Examiner wish to discuss this matter, please contact the undersigned attorney.

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Douglas E. Mackenzie
Reg. No. 38,955
SCHEIN & CAI LLP
100 Century Center Court
Suite 315
San Jose, CA 95112
408-436-0789

CERTIFICATE OF TRANSMISSION

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Douglas E. Mackenzie
Reg. No. 38,955